KOLBASNIKOVA, A. I.

95273. (Russian) Influence of Glass on its Hardening Vit... ... Chemical Composition.

4

4 6 20,

KOLBASNIKOVA, A.I., kand. tekhn. nauk.

Methods of determining and calculating vitrification temperatures.
Trudy VNIIStekla no.37:50-58 '57.   (MIRA 11:1)
                        (Glass research)

KOLBASNIKOVA, A.I.

YEGOROV, B.D., kand. tekhn. nauk; KOLBASNIKOVA, A.I., kand. tekhn. nauk.

Methods of determining the coefficient of linear expansion in glass.
Trudy VNIIStekla no.37:67-70 '57.   (MIRA 11:1)
                         (Glass--Testing)

BARTENEV, O.M.; KOLBASNIKOVA, A.I.

Effect of various factors on glass tempering. Inzh.-fiz.zhur. no.5:
99-103 My '58.   (MIRA 12:1)

1. Nauchno-issledovatel'skiy institut stekla, g. Moskva.
              (Glass)

AUTHORS: Demishev, G. K., Kolbasnikova, A. I.
                                                       72-58.-3-7/15

TITLE: Supersonic Glass Grinding (Shlifovka stekla s pomoshch'yu
          ul'trazvuka)

ABSTRACT: Works on the application of supersonic oscillations for
            boring, drilling, and cutting of glass, ceramics, germanium
            and other hard materials are available by N. Klark, D. P.
            Aloizio, L.B. Pirozhnikov, I.S. Vaynshtok, I.V. Metelkin
            (reference 1). Following a suggestion by N. P. Krasnikov
            and V.S. Pod"yel'skiy (reference 2) M. A. Bezborodov, A.
            A. Gezburg and N. P. Krasnikov (reference 1) utilized this
            manufacturing method for the grinding of plane glass sur -
            faces. Investigations on this method of grinding where also
            carried out by G. M. Bartenev, A. I. Kolbasnikova, I. S.
            Vaynshtok and G. K. Demishev in the Institute for Glass.
            The plant ,in the acquisition and mounting of which
            participated I.S. Vaynshtok and V. M. Antonov (reference 3),
            comprises the generator ZG-2A , the amplifier TU-600, the

Card 1/3

Supersonic Glass Grinding

72-58-3-7/15

frequency-meter ICh -6, the rectifier. VG -2, the autotrans-
former LATR -1 and others. The design of vibrator corre-
sponds to that described by Klark in his work. The total
view of the grinding wheel is given in figure 1. The grinding-
tool represented in figure 2, proved to be the most suitable
one. Moreover, the grinding operation is described. The
quality of the surface was exaimend by means of a double
microscope of the type MIS-11. As may be seen from table 1,
the ground quality of the surface does not depend on the
period of grinding, whereby grinding with the narrow face
of the grinding tool- under equal conditions - results
always in a coarser surface than grinding with the wide
lateral face. The mechanism of the grinding operation was
described in the monograph by N. N.Kachalov (reference 1).
The grinding results with various specific pressures of
grinding are given in tabel 2. As may be seen from this, it
has no effect on the quality or the surface, just like the
grinding with various amplitudes of vibration (figure 3).
Approximately the same quality of surface is achieved with
supersonic grinding as with the ordinary grinding-method.

Card 2/3

Supersonic Glass Grinding

72-58-3-7/15

There are 2 figures, 3 tables, and 7 references, 6 of which are Soviet.

ASSOCIATION: Institut stekla (Institute for Glass)

1. Glass--Machining : 2. Ultrasonic radiation--Applications

Card 3/3

AUTHORS: Bartenev, G. M., Kolbasnikova, A. I.   57-28-6-11/34

TITLE: On the Comparison of the Theory of Glass
               Hardening With Experimentation (K sravneniyu teorii
               zakalki stekla s eksperimentom)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 6,
               pp. 1195-1200 (USSR)

ABSTRACT: Glass hardening is at present being used in an ever-
               -increasing degree as an effective method of increasing
               the strength and the thermal durability of glass products,
               especially for the production of   new   types of extremely
               solid technical glass. The method of hardening has already
               been described previously (references 1 and 2). The
               elasticity theory (reference 1) leads to the following
               formula for internal tensions in hardened flat glass:
               $\sigma(x) = \frac{E}{1-\mu}(\varepsilon - \bar{\varepsilon})$. (1). Finding the mathematical
               form of the function $F(x, \delta)$ is the basic problem of the
               theory of glass hardening. The tensions of the elongation

Card 1/4

On the Comparison of the Theory of Glass Hardening
With Experimentation   57-28-6-11/34

$\sigma = \sigma_y = \sigma_z$ in the central plane of the hardened plate are

$$\sigma = \frac{\beta E}{1-\mu} T_g \varphi(\delta) = K\varphi(\delta) \tag{2}$$

Renewed investigation of the influence exercised by
physical properties upon the amount of hardening-tensions
(in the case of regular hardening) showed agreement of
experimental data with the formula (2). The authors
hardened 8 types of glass of different composition. They
were selected in such a manner that there was considerable
difference with respect to the quantity K (table). The
worked-out results (figure 2) of experimental data were
given in dimensionless parameters ΐ(δ) and ha which make it possible
to compare the hardening formula: with the experiment.
Herefrom it may be seen that not one of the theoretical
dependences agrees with the experiment. This is probably
caused by the fact that the formulae are based upon
inaccurate data. As a result of the generalization of
experimental data (figure 2) the dependence of the

Card 2/4

On the Comparison of the Theory of Glass Hardening   57-28-6-11/34
With Experimentation

hardening function on the criterion of Bio (upper curve) was obtained. This can be utilized in calculating the degree of hardness according to formula (2). The analytical form of this dependence at $ha > 0,5$, which practically comprises all cases occurring in the technology of hardening, can be expressed in the approximation by the formula

$$\varphi(\delta) = 0,23\delta^2.$$

At present degrees of hardness were attained which correspond to $\varphi(\delta) = 0,31$. It follows herefrom (reference 2) that where the limiting value theoretically expected at $ha \to \infty$ is $\varphi(\delta) = 0,36$, the possibilities of increasing the degree of hardness are exhausted. Experimental data (figure 2) and the amount of the maximum degree of hardness $\varphi(\delta) = 0,69$, which were calculated according to the formula

$$\varphi(\delta) = \frac{1}{\delta}\int_0^\delta \ln\cos y\, dy \qquad (3)$$

Card 3/4   lead to the conclusion that the possibilities of

On the Comparison of the Theory of Glass Hardening
With Experimentation   57-28-6-11/34

increasing the strength of glass by hardening are not
exhausted. There are 3 figures, 1 table, and 11 references,
11 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut stekla,
Moskva (Moscow, All-Union Scientific Research Institute
for Glass)

SUBMITTED: October 20, 1956

1. Glass—Hardening   2. Glass—Mechanical properties
3. Hardenability—Theory

Card 4/4

84313

15.4120 2109

S/170/60/003/009/006/020
B019/B060

AUTHORS: Bartenev, G. M., Kolbasnikova, A. I.

TITLE: The Effect of Prolonged High-temperature Heating on the
               Strength of Glass

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 9,
               pp. 44-47

TEXT: The authors made bending tests to study the influence of duration
and temperature of heating on the strength of glass. Fig. 1 shows the
bending strength of glass as a function of heating temperature in the
range from 500 to 710°C. Previous tests had shown that there were no re-
sidual stresses left after a heating time of two hours and a subsequent
cooling rate of 1°C/minute. As may be seen from Fig. 1, the strength of
glass is dependent not only on the temperature of the thermal treatment,
but also on the mechanical history of the samples. When heating over two
hours the bending strength of samples polished at the edges is almost
doubled. Fig. 2 shows that a heating time of 5 - 6 hours yields the
best strength factors, regardless of the mechanical treatment. The

Card 1/2

The Effect of Prolonged High-temperature
Heating on the Strength of Glass

84313
S/170/60/003/009/006/020
B019/B060

character of the mechanical pre-treatment influences the degree of strength
increase. The main factors accounting for the strength increase, which
attained a maximum of 13.8 in 2-mm glass and a maximum of 10.2 kg/mm^2 in
6-mm glass, proved to be temperature and duration of heating. The cooling
rate had a lesser effect. Also the effect of the thermal treatment on the
strength of the glass surface was checked on the same types of glass. High-
temperature thermal treatment was found to cause no strength increase
on the glass surface beyond 10.5 kg/mm^2 (6-mm glass). For 2-mm glass the
respective value is again 15.7 kg/mm^2. A. I. Ivanova (Ref. 4), I. I.
Kitaygorodskiy, and A. I. Berezhnoy (Ref. 5), and G. Markus (Ref. 8)
are mentioned. There are 2 figures and 9 references: 7 Soviet and 2 US.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut stekla,
g. Moskva
(State Scientific Research Institute of Glass, Moscow)

SUBMITTED: June 13, 1959

Card 2/2

S/081/62/000/023/065/120
B180/B144

AUTHORS: Demishev, G. K., Butovich, L. N., Kolbasnikova, A. I.,
               Galdina, N. M.

TITLE: Co^{60} gamma ray detection of internal defects in certain
               electrically fused refractories during manufacture

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 489, abstract
               23K375 (Steklo. Byul. Gos. n.-i. in-ta stekla, no. 4 (113),
               1961, 15-24)

TEXT: The article describes a method for the systematic quality control of
electrically produced refractories. Flaws and other cavities are detec-
ted by means of hard gamma-radiation from the isotope Co^{60}, using a wide
beam and X-ray photography. Experimental work indicates the possibility
of using this "gamma-ray" flaw detection on refractories of the "bakor-33"
type. [Abstractor's note: Complete translation.]

Card 1/1

DEMISHEV, G.K.; BUTOVICH, L.N.; KOLBASNIKOVA, A.I.; GALDINA, N.M.

Gammagraphic control of internal defects in fused refractories.
Ogneupory 27 no.6:288-292 '62.
(MIRA 15:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut stekla.
(Gamma rays—Industrial applications)
(Refractory materials—Defects)

L 20500-65   EWT(m)/EWP(b)/EWP(e)   Pq-4   WH
ACCESSION NR: AP4049086   8/0072/64/0(0/011/0010/0012

AUTHOR: Bartenev, G.M. (Doctor of chemical sciences); Polbasnikova, A. I.
(Candidate of technical sciences)

TITLE: The effect of high temperature treatment on glass surface strength

SOURCE: Steklo i keramika, no. 11, 1964, 10-12

TOPIC TAGS: glass surface strength, high temperature treatment, annealed glass, glass
bending strength

ABSTRACT: Earlier findings by the same and other authors on the effect of various heat
treatments on glass surface strength are discussed, after which the effect of prolonged
processing at high temperature on sheet glass (5-6 mm or 2 mm thick), as well as on the
same glass subjected to polishing and etching before heat treatment, is reported. Optimal
strength was found for glass maintained at 650 C for 2 hours, while no change was observed
upon treatment at other temperatures. After heating, the glass specimens were cooled at
a degree min. left at room temperature for 24 hours, then subjected to symmetrical
bending stress. Under such treatment, the surface strength was found to assume values
characteristic for the natural surface of sheet glass formed during drawing from the

Card   1/3

L 20500-65
ACCESSION NR: AP 4049086

2

viscous glass mass. This fact also explains why prior hardening of the surface before
tempering is useless (see Fig. 1 of the Enclosure). The strength of the natural surface
of glass is a highly stable characteristic which does not change under the influence of high
temperature. Manufactured sheet glasses represent poorly crystallizing systems even at
high temperature. Orig. art. has: 3 figures.

ASSOCIATION: Kafedra fiziki tverdogo tela, MGPI imeni V.I. Lenina (Solid State Physics
Department, MGPI); Institut stekla (Glass Institute)

SUBMITTED: 00   ENCL: 01   Sub CODE: MT, OP

NO REF SOV: 004   OTHER: 001

Card   2/3

L 20500-65
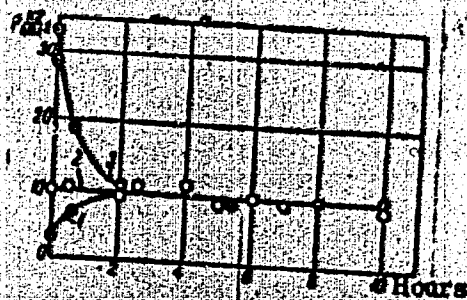ACCESSION NR: AP4049086

ENCLOSURE: 01

Figure 1. The effect of the duration of treatment at 650 C on the Strength of sheet glass 5mm in thickness:

1 - subjected to polishing; 2 - with a natural surface; 3 - etched with hydrofluoric acid.

Card 3/3

VANIN, Vasiliy Ivanovich; KOLBASNIKOVA, A.I., kand. tekhn. nauk red.

[Annealing and hardening sheet glass] Otzhig i zakalka listovogo stekla. Izd.2., dop. i perer. Moskva, Stroiizdat, 1965. 113 p. (MIRA 18:12)

BIL'TYUKOVA, E.P., inzh.; KOLBASNIKOVA, A.I., kand.tekhn.nauk; SAVITSKIY, M.R.,
kand.tekhn.nauk

Conference of workers of the department of technical control and
factory laboratories in the manufacture of structural and technical
glass. Stek. i ker. 22 no.3:47 Mr '65.

(MIRA 18:10)

TERENT'IEVA, O.F.; KANDEL', O.M.; STRUKOVA, M.T.; KOLBASNIKOVA, A.N.;
KOZLOVA, A.A.

The time of molasses production and the manufacture of citric acid.
Trudy VKNII no.16:104-108 '62.
(Molasses) (Citric acid)   (MIRA 16:5)

16.1500   16.6500

86199

S/055/60/000/005/005/010
C111/C222

AUTHOR: Kolbasinskiy, A.S.

TITLE: Some Generalizations of A.M. Ostrowski's Theorems on Iteration Processes

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya I, matematika, mekhanika, 1960, No.5, pp. 40-48

TEXT: Let X be an Euclidean complex space, A be a Hermitean non-singular matrix,

(1) $Ax = b$

be a system of algebraic equations, where b is a known, and x is the sought vector column in the X. Let

(2) $h = A^{-1}b$

be the solution of (1). If $x_\varkappa$ is an approximate value of h then let

(3) $y_\varkappa = h-x_\varkappa$

and

(4) $r_\varkappa = b-Ax_\varkappa = Ay_\varkappa$.

Card 1/5

86199

8/055/60/000/005/005/010
C111/C222

Some Generalizations of A.M.Ostrowski's Theorems on Iteration Processes
The quadratic form $A\langle y_\varkappa\rangle = \bar{y}_\varkappa^! A y_\varkappa$ is called the error function. For an arbitrary initial vector x_0 the sequence of approximations $\{x_\varkappa\}$ is constructed according to the following scheme: Let $x_\varkappa$ be known; a) one chooses a subspace $E_\varkappa \subset X$, b) one chooses a vector $d_\varkappa \in E_\varkappa$ so that

$$(5) \qquad A\langle y_\varkappa - d_\varkappa \rangle = \min_{d \in E_\varkappa} A\langle y_\varkappa - d \rangle \,,$$

c) one chooses a number $q_\varkappa \in (0,2)$, d) then it holds

$$(6) \qquad x_{\varkappa+1} = x_\varkappa + q_\varkappa d_\varkappa \cdot$$

This construction is called an iteration; the sequence $\{E_\varkappa\}$ is called the way of iteration; the numbers $q_\varkappa$ are coefficients of relaxation. If the choice of the $E_\varkappa$ depends on the intermediate results then the author calls it control of the way of iteration. Let r^{E_μ} be the vector arising by a projection of the vector r onto E_μ,

Card 2/5

86199

Some Generalizations of A.M.Ostrowski's Theorems on Iteration Processes

(7) $$r_{\varkappa,\mu} = r_{\varkappa}^{E_\mu}.$$

The letters $\alpha, \beta, \delta, \varkappa, \mu, \nu, \sigma, \tau$ are indices or natural numbers.

Theorem 1: Let A be positive definite in X. For a certain τ and a certain $g > 0$ let exist a μ for all $\varkappa \in (\varkappa, \varkappa + \tau - 1)$ so that it holds

(8) $$\|r_{\varkappa,\mu}\| \geq g\|r_{\varkappa}\| .$$

For an $\alpha \leq \tau$ let

(9) $$\sum_{\sigma=0}^{\infty} \min_{\sigma\tau+\alpha \leq \mu < (\sigma+1)\tau+\alpha} (2q_\mu - q_\mu^2)$$

be divergent. Then the sequence $\{x_{\varkappa}\}$ converges to the solution h of (1).

Theorem 2: If in theorem 1 the condition (9) is replaced by: for all $\varkappa$ and an $\varepsilon \in (0,1)$ it holds

(10) $$q_{\varkappa} \in (\varepsilon, 2-\varepsilon),$$

Card 3/5

86199
S/055/60/000/005/005/010
C111/C222

Some Generalizations of A.M.Ostrowski's Theorems on Iteration Processes

then there exist numbers a and $\theta \in (0,1)$ so that it holds

(11) $\|y_{\varkappa}\| \leq a\theta^{\varkappa}$.

Theorem 3: If A is positive definite in all $E_{\varkappa}$ but not in X then there exists an open set of initial vectors x_0 for which the sequences $\{x_{\varkappa}\}$ do not converge to the solution of (2) for an arbitrary choice of the $q_{\varkappa}$ of $[0,2]$.

A set M of subspaces $E \subset X$ is called "η-representing" in X if for η and all vectors $r \in X$ it holds:

(18) $\max_{E \in M} \|r^E\| \geq \eta \|r\|$.

A way of iteration is called "quasicyclic with the period τ" if for a τ and an $\eta > 0$ for all $\varkappa$ the sets of the spaces $\{E_{\varkappa}, E_{\varkappa+1}, \ldots, E_{\varkappa+\tau-1}\}$ are η-representing in X.

Card 4/5

L 13807-63

ACCESSION NR: AP3004308   s/0030/63/000/007/0077/0079

AUTHOR: Chernov, V. N.; Bereznikov, V. M.; Drevush, V. P.; Kolbasov, A. N.

TITLE: Automatic registration of the growth of microorganisms

SOURCE: AN SSSR, Vestnik, no. 7, 1963, 77-79

TOPIC TAGS: microorganism culture, growth registration, turbidimeter, photoelement, Geneva movement

ABSTRACT: A device for the continuous automatic registration of change in the rate of growth of microorganism cultures was developed for the purpose of monitoring the effects of additives (antibiotics, antimetabolites, etc.) to cultures. The device consists of a twelve-place cultivating carousel electrically synchronized with a turbidimeter (see Fig. 1 of Enclosure). Motion is imparted to twelve-position Geneva-movement mechanism (1) by synchronous electric motor (2), which rotates carousel (3) with culture tubes (4) ($T_1....T_{10}$) and control diaphragms (E_v and E_n) within thermostatic chamber (5), whose preset temperature is maintained by automatic regulator (6). Each cycle of the Geneva movement places a culture tube (or one of the control diaphragms) in front of electric bulb (7), whose light,

Card 1/2

L 13807-63

ACCESSION NR: AP3004308

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condensed by a lens (8), passes through adjustable diaphragm (9), light filter (10), calibrated diaphragm (11), and a culture tube (4) which reaches photoelement (12). The signal from the photoelement varies with the change of biomass or density within the culture tube. The device allows for the stirring and aeration of cultures by means of fluoroplastically coated magnets (13) within the culture tubes which are rotated by horseshoe magnets ($M_1...M_{12}$) powered by induction electric motor (14), whose speed is controlled by regulation (15). Signals from photo-element (12) proceed through turbidimeter input (16) to automatic registration device (17) via summator (18), which also receives a feedback voltage from the reochord of the registration device. The growth of cultures is recorded in separate curves ($K_1...K_{10}$) on perforated paper tape in different colored inks. The recording head is synchronized with the Geneva movement of the carousel by means of synchronizer (19). The use of a single metering channel assures high reliability. The absolute amount of the biomass can be obtained by comparison with the maximum and minimum density control diaphragms (E_v and E_n). Power source (20) provides stabilized voltage current for the metering channel. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 00   DATE ACQ: 15Aug63   ENCL: 01
SUB CODE: AM   NO REF SOV: 000   OTHER: 000
Card 2/2

CHERNOV, V.N.; EPSHTEYN, M.I.; BEREZIN, B.V.; KOLBASOV, A.N.

A device for the measurement of the illumination of micro-
organisms in different spectral regions, 300-1,000 mm.
Mikrobiologiia 33 no.1:172-175 Ja-F '64.   (MIRA 17:9)

1. Institut mikrobiologii AN SSSR.

26. 5200

39515

S/649/61/000/139/016/018

1028/1228

AUTHOR: Kolbasov, B. N.

TITLE: Investigation of heat transferred to carbon dioxide in the region of thermodynamic crisis of a turbulent flow in pipes

SOURCE: Moscow. Institut inzhenerov zheleznodorozhnogo transporta. Trudy, no. 139. 1961. Teoriya podobiya i yeye primeneniye v teplotekhnike; trudy pervoi mezhvuzoskoy kon- ferentsii, 193-199

TEXT: A simple non-empirical method to determine the temperature at the surface of a channel cooled by carbon dioxide is proposed. Existing formulae for heat transfer in the region of thermodynamic crisis are so complex, as to need empirical corrections, and do not fit the experimental data; this fact prompted the present investigation. An experimental contour 6 m high, through which carbon dioxide flowed by con- vection was heated from below and cooled from above. The experimental section was placed horizontally in the upper part consisting of a steel pipe through which passes an alternating electric current. On the ex- ternal surface were fixed thermocouples, which measured the temperature. The pressure, rate of flow, current, and the tension were recorded. The coefficient of heat transfer where the thermocouples were fixed was de- termined. The assembled data agrees with the formula:

Card 1/2

$$Nu_c = 0.021\ Re^{0.8}Rr^{0.43}(Pr_w/Pr_c)^{0.25}$$

(4)

Investigation of heat...

S/649/61/000/139/016/018
1028/1228

where the indexes c and w indicate parameters of the heat carrier and the wall, respectively. The Voskresenskiy-Turilina theoretical formula was tested and its agreement with experimental data found to be satisfactory. I. V. Yanushevich, O. B. Samoylov, and V. N. Robolovich are mentioned as having collaborated with the author. There are 4 figures.

ASSOCIATION: Moskovskiy inzhenero-fizicheskiy institut (Moscow Institute of Engineering and Physics)

Card 2/2

PONOMAREV-STEPNOY, N. N.; KOLBASOV, B. N.; VIYEVNOV, A. N.

"High-temperature gas cooled power reactor."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva,
31 Aug-9 Sep 64.

KOLBASOV, D. A. (Eng.); DOLGIKH, B. I. (Eng.)

Shoe Industry

Sewing of assorted styles and sizes of stock in sewing shops.   Leg. Prom. 12
No. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December   1952 Uncl.

Kolbasov, D. N.

"Investigation of Heat Transfer and Thermal Properties of Carbon Dioxide in the Critical Region of Thermodynamic State."

Report presented at the Conference on Heat and Transfer.
Minsk, USSR, 5-10 June 61

26-58-4-7/45

AUTHOR: Kolbasov, O.S., Candidate of Juridical Sciences

TITLE: Lenin's Ideas on the Conservation of Natural Resources (Le-
                ninskiye idei ob okhrane prirody)

PERIODICAL: Priroda, 1958, Nr 4, pp 41-44 (USSR)

ABSTRACT: Lenin stressed the importance of rational exploitation of
                natural resources according to scientific and technical
                principles, and during the first years after the Revolution
                the Soviet Government issued decrees and regulations for the
                protection of forests, parks and other natural objects of
                importance. Special agencies were established all over the
                USSR to enforce these regulations and heavy fines and punish-
                ments were imposed on violators. This policy is continued
                under the present Soviet rulers and will be intensified with
                the growing industrialization of the country.
                There is 1 photo and 6 Soviet references.

ASSOCIATION: Tomskiy gosudarstvennyy universitet imeni V.V. Kuybysheva
                (Tomsk State University imeni V.V. Kuybyshev)

AVAILABLE: Library of Congress

Card 1/1   1. Natural resources-Conservation   2. Natural resources-USSR

KOLBASOV, V. A.

AUTHORS: Dianov-Klokov, V.I., and Kolbasov, V.A.   120-5-23/35

TITLE: Bi-directional Photo-electric Interference-band Recorder
             (Dvunapravlennyy fotoelektricheskiy registrator
             interferentsionnykh polos)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.5,
                                           pp. 95 - 99 (USSR).

ABSTRACT: The changing phase of the interference pattern is con-
             verted into a moving electric vector. A previous attempt at
             such an instrument (Ref.2) was successful only when the phase
             of the pattern changed monotonically. The present apparatus
             will also deal with changes in direction, and is intended for
             use with the proton refractometer due to Obreimov (Ref.1). It
             was developed in the optical laboratory of the INEOS Ac.Sc.
             USSR. Three photocells are used to receive the light. One
             receives the total flux, the other two receive light split
             equally by a wedge located opposite a narrow slit. By
             suitably combining the outputs of the cells, it is possible
             to derive signals proportional to the sum and difference of
             illuminations from symmetrical parts of an interference band.
             These component signals define a rotating electric vector.
             Fig. 2 shows how the modulus of this vector is affected by

Card 1/2

120-5-23/35
Bi-directional Photo-electric Interference-band Recorder.

the fraction of the interference band intercepted by the slit.
The light source is a mercury arc fed from the mains and thus
modulated at 100 c.p.s. Fig. 3 is a block diagram showing
how the modulated output currents from cells type ФЭУ-25 are
added and phase shifted $\pm$ 45°, passed through a tuned ampli-
fier with a.g.c. to remove changes in signal strength and
applied to the rotor of the synchronous indicator type ВД-3.
The complete circuit diagram of Fig.4 with component values
shows the use of a transformer as smoothing choke in the
power pack. The 100 c.p.s. ripple voltage across the secon-
dary of the transformer feeds the stator of the indicator.
The position of the interference pattern can be located to
within 5 - 10% of a period when it is changing at a rate of
5 periods/sec. Seven valves are used. Assistance was
received from Ye.A. Shibalov, D.D. Brezhnev, Zvagel'skiy, F.G.
There are 4 figures and 5 references, 4 of which are Slavic.

ASSOCIATION: Institute for Elemental-organic Compounds Ac. Sc.
              USSR (Institut elementoorganicheskikh soyedineniy
              AN SSSR)
SUBMITTED: March 7, 1957.
AVAILABLE: Library of Congress
Card 2/2

KOLBASOV, V. A.

AUTHORS: Dianov-Klokov, V.I., Candidate of Physical-   67-58 -2-11/26
            Mathematical Sciences, Kolbasov, V.A., Engineer,
            Lemarin'ye, K.N., Engineer

TITLE: The Spectral Analysis of Nitrogen in Argon (Spektral'noye
            opredeleniye primesey azota v argone)

ABSTRACT: It is said in the introduction that this method has proved to be
             of practical use in Soviet plants. However, the apparatus used for
             this purpose have certain disadvantages as a result of which in-
             accurate results are obtained in individual cases. In order to pre-
             vent this, it is recommended in the ocurse of this paper that the
             light sensitiveness of this apparatus be increased by summation of
             loads. In this case the individual pulses of the photocurrent are
             collected during the period of from 10-20 seconds in loading con-
             densers. Meanwhile, the luminescent spot produces a straight line,
             the "arrow", the angle of which can easily be computed. The os-
             cillographic tube "8 LO39" has a screen with afterglow, so
             that the "arrow" can be conserved for 1 minute. Centering of the
Card 1/2   beam is brought about by means of two revolving deflection coils.

The Spectral Analysis of Nitrogen in Argon   67-58-2-11/26

Rough adjustment of the two analyzer channels is carried out by
switching over the loading condensers, and fine adjustment is
brought about by diaphragming the slots before the photomulti-
pliers. In the rectifier of the feed block ferroresonance stabil-
ization is applied. Selenium rods (ABC-7-3P) serve as valves.
In the case of particularly pure gases it is recommended to use
a collection of suitable filters instead of spectrographs.
There are 3 figures, 3 references, all Soviet.

AVAILABLE: Library of Congress

1. Nitrogen—Spectrum   2. Argon—Applications   3. Laboratory
equipment—Operation

Card 2/2

37800

S/120/62/000/002/025/047
E039/E435

24.7900

AUTHORS: Kolbasov, V.A., Mukhina, M.M., Nazarov, V.P.

TITLE: A spectrometer for electron paramagnetic resonance absorption with a high frequency modulated magnetic field

PERIODICAL: Pribory i tekhnika eksperimenta, no.2, 1962, 107-110

TEXT: This spectrometer can record electron paramagnetic resonance (E.P.R.) absorption in a sample containing paramagnetic centres at room temperature and at 77°K for wavelengths $\sim$ 3 cm. The E.P.R. absorption signal is displayed on a long afterglow cathode ray tube or recorded on tape.   A block diagram of the apparatus is given and also a circuit diagram of the recording apparatus.   An adjustable rectangular resonator containing the sample is situated between the poles of an electromagnet, the field of which is modulated at a frequency of 465 Kc/s.   The constant component of the magnetic field can be varied in the range 50 to 5000 oersteds and is stabilized to 0.01%.   The recording apparatus consists essentially of a preamplifier which simultaneously amplifies the E.P.R. signal and the klystron

Card 1/2

S/120/62/000/002/025/047
E039/E435

A spectrometer for electron ...

frequency (465 Kc/s and 295 Kc/s respectively);   an indicator circuit for the amplification and recording of the E.P.R. signal and a high frequency generator.   These circuits are described in detail.   By simultaneously amplifying the E.P.R. signal and klystron frequency the number of tubes and other components is decreased, thereby increasing the reliability of the apparatus. In addition, the separation of the pre-amplifier and indicating circuits simplifies the problem of screening.   The apparatus has been used for recording E.P.R. spectra of different classes of organic compounds.   Its sensitivity is about 10^{-11} mole for the free radical of diphenylpicrylhydrazyl.   There are 5 figures.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR
             (Institute of Elemental-Organic Compounds, AS USSR)

SUBMITTED: July 6, 1961

Card 2/2

KOLBASOV, V.A.; MUKHINA, M.M.; NAZAROV, V.P.

Electronic paramagnetic resonance absorption spectrometer allowing
high-frequency magnetic field modulation. Prib. i tekh. eksp.
7 no.2:107-110 Mr-Ap '62.   (MIRA 15:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
        (Spectrometer) (Paramagnetic resonance and relaxation)

KOLBASOV, V.A.; MUKHINA, M.M.

      Simple paramagnetic resonance spectrometer with high-frequency
modulation of the electric field. Prib. i tekh. eksp. 8 no.1:
84-86 Ja-F '63.   (MIRA 16:5)

    1. Institut elementoorganicheskikh soyedineniy AN SSSR.
                (Paramagnetic resonance and relaxation)
                     (Spectrometer)

KOLBASOV, V.A.; PALITSYNA, I.A.; SHIBALOV, Ye.A.

      Continuous self-recording refractometer. Zav.lab. 30 no.3:
367-368 '64.   (MIRA 17:4)

      1. Institut elementoorganicheskikh soyedineniy.

DRAVSKIKH, A.F.; DRAVSKIKH, Z.V.; KOLBASOV, V.A.;
    MISEZHNIKOV, G.S.; NIKULIN, D.Ye.; SHTEYNSHLEYGER, V.B.

Study of the radio line of excited hydrogen at a wavelength of 5 cm.
using a quantum paramagnetic amplifier. Dokl. AN SSSR 163 no.2:332-
334 Jl '65.   (MIRA 18:7)

1. Submitted December 31, 1964.

L 1938-66 EWT(1)/FBD GW/WS-2

ACCESSION NR: AP5018742   UR/0020/65/165/002/0332/0334

AUTHOR: Dravskikh, A. F.; Dravskikh, Z. V.; Kolbasov, V. A.; Misezhnikov, G. S.;
Nikulin, D. Ye.; Shteynshleyger, V. B.

TITLE: Investigation of the radio line of excited hydrogen at 5 cm wavelength,
using a quantum paramagnetic amplifier

SOURCE: AN SSSR. Doklady, v. 165, no. 2, 1965, 332-334

TOPIC TAGS: radio astronomy, galaxy, galactic nebula, line intensity, line width,
hydrogen line, quantum device

ABSTRACT: Since stars are more likely to have excited hydrogen than neutral hydro-
gen, a study of the excited-hydrogen radio lines can yield information on the
structure of the galaxy. The authors describe experiments made in 1964, which con-
firmed the presence of such a line, plotting its profile in the Omega nebula. This
was made possible by using a traveling-wave quantum paramagnetic amplifier for 5-cm
wavelength, operating at 4.2K, with gain of 25 db and bandwidth 26 Mc. The radio-
spectrograph used for the observation was a modulation-type radiometer with triple
frequency conversion and contour analyzer. Two measurements were made (in May and
July). In the first the spectrum from the nebula was compared with the radiation
spectrum of the earth's atmosphere and analyzed in the 5.5-Mc band, and in the

Card 1/2

L 1938-66
ACCESSION NR: AP5018742

second the comparison was with the radiation from A-Cygni and the analysis in the
3.5-Mc band. Similar results were obtained in both cases. A pronounced increase
in the radiation from the nebula was observed in the 5763 Mc region. The radio-
line intensity at the maximum is estimated at 3.8 ± 0.5% of the continuous spec-
trum, and the width at 50% intensity is 1.2 ± 0.3 Mc. The effect of the earth's
rotation around the sun on the line position was also observed. "The authors thank
S. E. Khaykin, Uu. N. Pariyskiy, D. V. Korol'kov, P. A. Agadzhanov, Ye. A. Rozen-
man, V. M. Turevskiy, V. P. Kosolapov, and O. N. Shiviv for useful discussions and
help." This report was presented by V. A. Kotel'nikov. Orig. art. has: 4 figures.

ASSOCIATION: none
SUBMITTED: 24Dec64

ENCL: 00   SUB CODE: AA

NR REF SOV: 004

OTHER: 001

Card 2/2

DZHAGATSPANYAN, R.V.; ZETKIN, V.I. Prinimali uchastiye: OSPELOV, V.Ye.;
    KOLBASOV, V.I.

    Sulfochlorination of polyethylene under the action of CO^{60} gamma
    radiation. Plast.massy no.10:5-8 '64.   (MIRA 17:10)

KOLBASOV, V.I., BARDENSHTEYN, S.B., DZHAGATSPANYAN, R.V.

Quantitative analysis of a mixtrue of monochlorides, based
on their infrared absorption spectra. Zav.lab. 26 no.5:587-
590 '60.   (MIRA 13:7)
                    (Chlorides--Spectra)

KOLBASOV, V.I.; BARDENSHTEYN, S.B.; DZHAGATSPANYAN, R.V.

    Quantitative determination of impurities in industrial epichlorohydrin
    from infrared absorption spectra. Zav.lab 26 no.10:1120-1122 '60.
                                            (MIRA 13:10)

            (Epichlorohydrin--Spectra)

8/032/61/027/003/010/025
B101/B203

AUTHORS: Kolbasov, V. I., Bardenshteyn, S. B., and Dzhagatspanyan, R. V.

TITLE: Quantitative analysis of crude trichloro ethane by means of
             infrared absorption spectra

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 3, 1961, 295-296

TEXT: To elaborate an efficient method for the simultaneous production of
perchloro-vinyl resin and trichloro ethane it was necessary to analyze the
crude trichloro ethane which consisted of 50-60% 1, 2-dichloro ethane,
40-50% 1, 1, 2-trichloro ethane, and 3-5% tetrachloro ethanes. An analysis
of the mixture by rectification takes much time (2-3 days) and is independ-
able. The present paper describes a method for the quantitative analysis
of crude trichloro ethane on the basis of infrared spectra taken with an
ИКС-14 (IKS-14) split-beam spectrophotometer. Such an analysis takes only
about one hr. The infrared spectra of the substances concerned are de-
scribed in publications: 1, 2-dichloro ethane (Ref. 1: A. Berton, Chim.
analyt. 38, No. 6, 207 (1956); Ref. 2: G. Pirlot, Bull. Soc. chim. belges,
58, No. 1, 28 (1949); Ref. 3: J. K. Brown, N. Sheppard, Trans. Faraday Soc,

Card 1/5

Quantitative analysis ...

8/032/61/027/003/010/025
B101/B203

48, 128 (1952)); 1, 1, 2-trichloro ethane (Ref. 2); 1, 1, 1, 2-tetrachloro ethane (Ref. 2 and Ref. 4: I. R. Nielsen, C. Liang, Z. W. Daasch, J. Opt. Soc. Amer., 43, 1071 (1953)); 1, 1, 2, 2-tetrachloro ethane (Refs. 1, 2, 4); as well as the method for the quantitative determination of their mixtures (Ref. 2, Ref. 5: A. I. Finkel'shteyn, Ts. N. Roginskaya et al., Zavodskaya laboratoriya, XXV, 8, 932 (1959)). The proposed analysis of the quaternary mixture of 1, 2-dichloro ethane, 1, 1, 2-trichloro ethane, 1, 1, 1, 2- and 1, 1, 2, 2-tetrachloro ethane is distinguished from the analysis described in Refs. 2, 5 by the use of the ИКС-14 (IKS-14) split-beam spectrometer, and the calculation of concentration on the basis of standard mixtures using the method of least squares (pentachloro ethane and 1, 1, 2, 2-tetrachloro ethane give superimposed bands at 1017 cm^{-1}, and are determined summationally). CCl_4 was used as a solvent. Well purified

preparations made by E. Sonin, the constants of which agreed with published data, were employed (Table 1). The figure shows the infrared spectra of the four substances studied (thickness of the absorption layer 0.01 mm). The optical density was determined according to Ref. 6 (Z. Williams, Anal. Chem. 29, No. 10, 1551 (1957)), the concentration of components was calcu-

Card 2/5

Quantitative analysis ...

S/032/61/027/003/010/025
B101/B203

lated by means of a system of four linear equations. To determine the coefficients of the equations, standard mixtures were prepared for the concentrations required, and the optical density of the analytical absorption bands of the components was determined. A total of 95 binary, ternary, and quaternary mixtures were prepared. The measured results were evaluated by the method of least squares. There are 1 figure, 2 tables, and 9 references: 4 Soviet-bloc and 5 non-Soviet-bloc. [Abstracter's note: Complete translation.]

Legend to the figure:
1) 1, 2-dichloro ethane;
2) 1, 1, 2-trichloro ethane; 3) 1, 1, 2, 2-tetrachloro ethane;
4) 1, 1, 1, 2-tetrachloro ethane
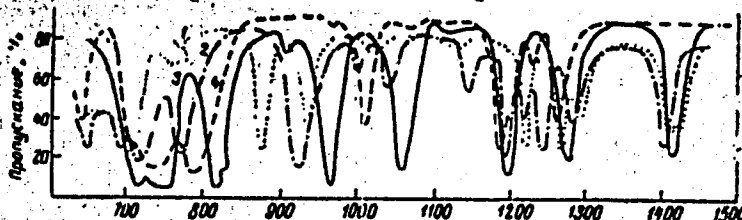
Card 3/5

KOLBASOV, V.I.; BARDENSHTEYN, S.B.; DZHAGATSPANYAN, R.V.;
    Prinimala uchastiye: KIRICHEK, V.Ya.

    Quantitative analysis of commercial hexachlorobenzene based
    on infrared absorption spectra. Zav.lab. 28 no.4:446-447
    '62.   (MIRA 15:5)
              (Benzene--Spectra)

KOLBASOV, V.I.; BARDENSHTEYN, S.B.; DZHAGATSPANYAN, R.V.; ZAKHAROV, Ye.V.

Quantitative analysis of technical m-chloronitrobenzene by
infrared absorption spectra. Zav.lab. 28 no.11:1326-1327 '62.
(MIRA 15:11)

(Nitrobenzene—Spectra)

KOLBASOV, V.I.; BARDENSHTEIN, S.B.; DZHAGATSPANYAN, R.V.

Quantitative analysis of impurities in chloroform from their
infrared absorption spectra. Zav.lab. 29 no.8:938-940 '63.
(MIRA 16:9)
(Chloroform) (Organic compounds--Absorption spectra)
(Chemistry, Analytical-- Quantitative)

MOTSAREV, G.V.; YAKUBOVICH, A.Ya.; ROZENBERG, V.R.; FILIPPOV, M.T.;
    DZHAGATSPANYAN, R.V.; BARDENSHTEYN, S.B.; KOLBASOV, V.I.;
    ZETKIN, V.I.

    Halogenation of aromatic silanes. Part 17: Addition of chlorine
    to phenyl-trichlorosilane. Preparation of hexachlorocyclohexyl-
    trichlorosilane and the mechanism of its formation. Zhur. ob.
    khim. 35 no.7:1178-1183 Jl '65.   (MIRA 18:8)

DZHAGATSPANYAN, R.V.; KOLBASOV, V.I.; BARDENSHTEYN, S.B.; KOROLEV, B.M.;
  ROMANSKIY, I.A.; ZETKIN, V.I.

  Structure of radiation chlorinated and sulfochlorinated polyethylene.
  Vysokom. soed. 7 no.11:1959-1963 N '65.   (MIRA 19:1)

1. Submitted December 26, 1964.

L 18417-66   EWT(m)/EWP(j)/T/EWA(h)/EWA(l)   RM

ACC NR: AP6003424   SOURCE CODE: UR/0190/66/008/001/0125/0130

AUTHORS: Dahagatspanyan, R. V.; Bardenshteyn, S. B.; Kolbasov, V. I.; Korolev,
B. M.

ORG: none

TITLE: Study of the structure of radiation chlorinated and sulfochlorinated
polypropylene

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 1, 1966, 125-130

TOPIC TAGS: polymer, polypropylene plastic, polymerization kinetics, IR spec-
troscopy, spectroscopy, chlorination, organic compound

ABSTRACT: The structure of sulfochlorinated polypropylene, sulfochlorinated by
means of radiation in the solid phase, was investigated by IR spectroscopy to
extend the work of R. V. Dahagatspanyan, L. M. Yakimenko, V. I. Zetkin, A. I.
Gershenovich, and V. S. Pospelov (Avt. svid. 149773, 1961 g.; RZhKhim, 1963
9T50). A comparison of IR spectra of a specimen chlorinated in solution and in
the solid phase is presented. The experimental results are presented graphically
(see Fig. 1). It was found that the crystallinity of polypropylene decreases
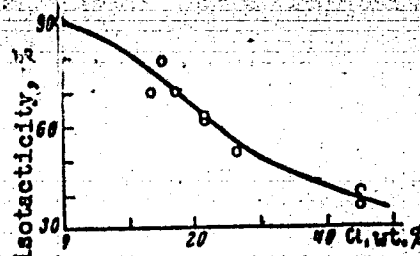
Card 1/2   UDC: 678.01:53+678.745

L 18417-66
ACC NR: AP6003424

O

Fig. 1. Dependence of optical density,
measured at the maximum
absorption for the band
973 cm^{-1} (measure of isotacticity),
on the chlorine content, %.

with increase in the degree of sulfochlorination. The crystallinity of specimens
sulfochlorinated in the solid phase is 3.5 times smaller than that of pure
polypropylene, and the specimens chlorinated in solution are amorphous. It is
concluded that for both types of specimens, i.e., chlorinated in solution and
in solid phase, displacement of hydrogen by chlorine takes place more rapidly
for CH_2 groups than for CH_3 group hydrogens. Orig. art. has: 8 graphs.

SUB CODE: 11/ SUBM DATE: 26Feb65/ ORIG REF: 003/ OTH REF: 007

Card 2/2

L 27304-66   EWT(m)/EPF(n)-2/EWP(j)/T/EWA(h)/EWA(l)   IJP(c)   GG/RM

ACC NR: AP6008980   (A)   SOURCE CODE: UR/0190/65/007/011/1959/1963

AUTHORS: Dzhagatspanyan, R. V.; Kolbasov, V. I.; Bardenshteyn, S. B.; Korolev, B. M.; Romanskiy, I. A.; Zetkin, V. I.

ORG: none

TITLE: The structure of radiation chlorinated and sulfochlorinated polyethylene

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 11, 1965, 1959-1963

TOPIC TAGS: polymer, polyethylene, chlorination, aliphatic compound, chlorine

ABSTRACT: The structure of radiation chlorinated and sulfochlorinated polyethylene in the solid state and in solution was studied by IR spectroscopy. The polyethylene specimens were prepared after the method of R. V. Dzhagatspanyan, L. M. Yakimenko, A. I. Gershenovich, and V. I. Zetkin (Avt. svid. No. 150625, 1961; Byull. izobreteniy, 1963, No. 20, 93). The IR spectra of the investigated compounds are presented. It was found that the IR spectra of bulk radiation sulfochlorinated polyethylene were identical to those   sulfochlorinated in bulk by chlorine. It is concluded that chlorination of the polymer occurs more readily in the amorphous phase than in the crystalline phase. Orig. art. has: 2 graphs.

SUB CODE: 11/ SUBM DATE: 26Dec64/ ORIG REF: 003/ OTH REF: 005

Card 1/1   UDC: 678.01:53+678.743

KOLBASOV, V. M. Cand Tech Sci — (diss) "Investigation of the

effect of carbonate rocks on the properties of cements having

different mineralogical composition," Moscow, 1960, 23 pp 150 cop.

(Moscow Chemico-technoloigcal Institute im D. I. Mendeleyev) (KL, 42-60, 114)

KOLBASOV, V.M.

Interaction between alumina-containing clinker minerals and calcium carbonate. Izv.vys.ucheb.zav.; khim.i khim tekh. 3 no.1: 199-203 '60.
(MIRA 13:6)

1. Kafedra tekhnologii tsementonogo proizvodstva Moskovskogo khimiko-tekhnologicheskogo instituta im. D.I. Mendeleyeva.
(Binding materials)

BUDNIKOV, P.P.; KOLBASOV, V.M.; PANTELEEV, A.S.

Hydration of alumina minerals of Portland cement in the presence of
carbonate microfillers. TSement 27 no.1:5-9 Ja-F '60.

(MIRA 14:2)

(Portland cement)

S/081/61/000/021/049/094
B110/B101

AUTHORS: Budnikov, P. P., Kolbasov, V. M., Panteleyev, A. S.

TITLE: Hydration of aluminum-containing minerals of Portland cement
           in carbonate microfillers

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 311, abstract
            21K307 (Tsement, no. 1, 1961, 5 - 9)

TEXT: If C_3A and C_4AF are hydrated in the presence of carbonate micro-
fillers (marble, dolomite, magnesite), the products change in their phase
composition. The resulting new crystalline phase is a product of the
chemical interaction between calcium aluminatehydrate and carbonates in
aqueous medium, and has been identified as $3 CaO \cdot Al_2O_3 \cdot 11H_2O \cdot$. The basic
phase resulting from the hydration of C_3A with marble and dolomite addit-
ions consists of hexagonal crystal hydrates with refractive indices that
are characteristic of calcium carboaluminate. These new formations are
also found in a hydrated mixture of C_3A and magnesite. The phase prevailing

Card 1/2

Hydration of aluminum-containing minerals....   S/081/61/000/021/049/094
                                                  B110/B101

in the hydration of C_4AF with microfillers consists of brown isotropic
iron hydroxides. Not much of C_3AH_6 is formed, and hardly any at all in
mixtures of C_4AF with marble and dolomite. Introducing carbonate micro-
fillers raises the strength of C_3A and C_4AF, probably due to the formation
of the abovementioned new phases. [Abstracter's note: Complete transla-
tion.]

Card 2/2

BUTT, Yu.M.; SAVIN, Ye.S.; KOLBASOV, V.M.; MAILYAN, R.L.

Lime concrete with a filler of shell limestone. Stroi. mat.
10 no.2:15-17 F '64.   (MIRA 17:6)

BUTT, Yu.M.; KOLBASOV, V.M.; LAGOYDA, A.V.

Hydration of aluminum-containing clinker minerals in the presence
of potash. Izv. vys. ucheb. zav.; khim. i khim. tekh. 8 no.1:
111-117 '65.   (MIRA 18:6)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni
Mendeleyeva, kafedra khimicheskoy tekhnologii vyazhushchikh
materialov.

TSYPIN, M.; KOSOV, A.; KOIBASOV, Ya.; GABRILOVICH, I.; OERTSOVSKIY, Ye.

Issuing credit on payment documents in transit certified by economic
organs. Den. i kred. 16 no.5:41-45 My '58.   (MIRA 11:6)

1. Glavnyy bukhgalter Samarkandskoy oblastnoy kontory (for Tsypin).
2. Glavnyy bukhgalter Zhitnyanskogo spirto-sovkhozkombinata Bryan-
skoy oblasti (for Kosov). 3. Starshiy kreditnyy inspektor Azerbay-
dzhanskoy respublikanskoy kontory Gosbanka (for Kolbasov). 4. Glav-
nyy bukhgalter Belorusskoy respublikanskoy kontory Gosbanka (for
Gabrilovich). 5. Glavnyy bukhgalter gorupravleniya Belorusskoy
respublikanskoy kontory Gosbanka (for Oertsovskiy).
                    (Samarkand Province—Credit)

SHABANOV, S.I.; KOLBASOV, Ye.V.

Study of high-speed thermal decomposition of fuels in a period-
ically operating plant with a solid heat-transfer agent, as
exemplified by Chernovskiy lignite. Izv. Sib. otd. AN SSSR
no.2:25-30 '62.   (MIRA 16:10)

1. Transportno-energeticheskiy institut Sibirskogo otdeleniya
AN SSSR, Novosibirsk.

KOLBASOVA, A.N.

Thorn test in hypertension. Sov. med. 28 no.6:13-15 Je '65.
(MIRA 18:8)

1. Gospital'naya terapevticheskaya klinika (:;av.- prof. V.A.
Triger) Chernovitskogo meditsinskogo instituta.

MEL'NIKOV, N.N.; ANDREYEVA, Ye.I.; YEVTEYEVA, N.M.; IVANOVA, S.N.;
    KOLBASOVA, I.M.; MARTYNOVA, Ye.A.

    Tin organic compounds as seed disinfectants. [Trudy] NIUIF
    no.171:131-134 '61.   (MIRA 15:7)
        (Tin organic compounds) (Seeds—Disinfection)

GERMAN, Anna Lazarevna; KOLBASOVA, Roza Borisovna; LEVINA, Ye.S.,
ved. red.

[Petroleum sulfo acids; their production and use] Neftianye
sul'fokisloty; proizvodstvo i primenenie. Moskva, Izd-vo
"Khimiia," 1964. 143 p.   (MIRA 17:6)

15(2)

AUTHORS: Kalliga, G. P., Kolbasova, V. A.   SOV/156-59-2-43/48

TITLE: On the Problem of the Technology of Zirconium Products by Means
             of the Method of Casting From Aqueous Suspensions (K voprosu
             tekhnologii tsirkoniyevykh izdeliy metodom lit'ya iz vodnykh
             suspenziy)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya
             tekhnologiya, 1959, Nr 2, pp 386-389   (USSR)

ABSTRACT: This work was carried out in co-operation with the Podoliya
             Works for Refractories (Podol'skiy zavod ogneupornykh izdeliy)
             and the Leningrad Institute for Physical Chemistry of Silicates
             of the AS USSR (Leningradskiy institut fizicheskoy khimii
             silikatov AN SSSR). The Institute mentioned under Association
             systematically investigated the technology named in the title.
             Technical circonium-oxide (analysis in Table 1) was used and MgO,
             $Ca(OH)_2$ or $CaCO_3$ served as stabilizers. The raw material was

             wet-ground in a ball-mill, the ZrO_2 freed from iron through

             hydrochloric acid. The distribution of the grain-sizes in the
             ground circonium-oxide is shown in table 2. The optimal composi-

Card 1/2   tion of the raw-material under variation of the humidity content

On the Problem of the Technology of Circonium Products   SOV/156-59-2-43/48
by Means of the Method of Casting From Aqueous Suspensions

(52-60%) and the pH-value (8.0 - 9.7) of the surroundings was
determined through casting tests. Specific gravity, water
absorption, porosity, and shrinkage were determined after the
burning (at 1720 - 1738 degrees). The results are listed in
table 3. The specific gravity was 5.26-5.29 g/cm^3, the water
absorption 0.2 - 0.6%. The optimal humidity content was 60% at
a stabilization through MgO, 42% with $CaCO_3$ as stabilizer. The
shrinkage was approximately 25% when $CaCO_3$ was used, and was by
7% lower than with MgO. The bigger stability, smaller humidity
of the raw-material and smaller shrinkage by adding $CaCO_3$
indicate its being the most suitable stabilizer in comparison
with MgO. There are 1 figure, 4 tables, and 8 references,
3 of which are Soviet.

PRESENTED BY: Kafedra tekhnologii keramiki i ogneuporov Moskovskogo khimiko-
tekhnologicheskogo instituta im. D. I. Mendeleyeva (Chair for
Technology of Ceramics and Refractories Moscow Institute for
Chemical Technology imeni D. I. Mendeleyev)

SUBMITTED: November 18, 1958
Card 2/2

KALLIGA, G.P.; KOLBASOVA, V.A.; POLUBOYARINOV, D.N.

Using calcium zirconate as a stabliser in manufacturing zirconia
products. Ogneupory 25 no.7:324-329 '60.   (MIRA 13:8)

1. Khimiko-tekhnologicheskiy institut im.Mendeleyeva.
            (Refractory materials)

21.2110

15.2230

AUTHORS: Rutman, D.S., Vinogradova, L.V., Makarova, T.S., Kalliga, G.P.,
            Kolbasova, V.A., Shal'nov, Ye.I.

TITLE: Improvement of the technology of zirconium products for
            casting from aqueous suspensions of the pre-stabilized ZrO_2

PERIODICAL: Ogneupory, no. 7, 1961, 301-302

TEXT: Experiments are described here which were conducted at the Podol'skiy
zavod ogneupornykh izdeliy (Podol'sk Plant of Refractory Products) to in-
vestigate the possibility of avoiding the previous grinding of zirconium
dioxide and, thus, shorten the technology of zirconium products. Industrial
zirconium dioxide with a content of 97.5% ZrO_2 + HfO_2 and chemically pure
calcium carbonate were used for the experiment. A mixture of 93% ZrO_2
and 7% CaO was prepared. Briquets were pressed from it at a pressure of
500 kg/cm^2 and burned at temperatures of 1600°C and 1700°C respectively.
The microscopic and X-ray structural analysis showed a stabilization
degree of 93-95% of ZrO_2 in the briquets. The effect of the pH of the
Card 1/3

Improvement of the technology ...

24739
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medium on the viscosity index of the crude zirconium mass was also tested. The particles are characterized by high values of the ζ potential, which cause the stability of the crude mass. With the parameters mentioned, an experimental batch of crucibles with a content up to 300 cm^3 was cast. The characteristic values of the blanks and of the products burned for 9 hr at 1600°C are compared in the table with the characteristic values for previous grinding of ZrO_2 and rinsing before stabilization. The duration of the production cycle is shortened by about ten days and grinding and rinsing of ZrO_2 previous to preparation for stabilization are omitted. The use of stabilized ZrO_2 without previous grinding showed that the sintering ability of the material was slightly improved. There are 1 figure and 1 table.

ASSOCIATION: Podol'skiy zavod ogneupornykh izdeliy (Podol'sk Plant of Refractory Products) D.S. Rutman, L.V. Vinogradova, T.S. Makarova; Khimiko-tekhnologicheskiy institut im. Mendeleyeva (Chemical-technological Institute imeni Mendeleyev) G.P. Kalliga, V.A. Kolbasova, Ye.I. Shal'nov.

Card 2/3

Improvement of the technology

Legend to Table 1: 1) Preparation method.
for zirconium products; 2) weight of unit
volume of the blanks, g/cm^3; 3) burned
products; 4) weight of unit volume, g/cm^3;
5) water absorption, %; 6) shrinkage, %;
a) casting from stabilized ZrO_2 without
previous grinding of the initial materials;
b) casting from stabilized ZrO_2 (usual
process)

Card 3/3

S/131/61/000/007/001/003
B105/B206

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Table

Метод изготовления циркониевых изделий	?	Обожженные изделия			
1	2	4		5	6
a Литье из стабилизированной ZrO_2 без предварительного помола исходных материалов	3,1	5,3	0,3	16,0	
б Литье из стабилизированной ZrO_2 (обычная технология)	2,8—3,1	5,4	0,0	17—20	

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AUTHORS: Kalliga, G. P., Kolbasova, V. A., Poluboyarinov, D. N.

TITLE: Peculiarities of the casting technology for zirconium products

PERIODICAL: Ogneupory, no. 1, 1962, 28-34

TEXT: An investigation conducted jointly with the Podol'skiy zavod
ogneupornykh izdeliy (Podol'sk Plant of Refractory Products) dealt with
the following processes: (1) Dressing of the raw material, (2) its acid
treatment and the casting process in various media. Experiments were
conducted with zirconium dioxide (97.55% ZrO_2, 1.15% TiO_2) which was
stabilized by admixture of 6% CaO. Industrial ZrO_2 and $CaCO_3$ were used as
initial materials. Zirconium dioxide was ground, washed with HCl, and
brought to pH = 3 with water. $CaCO_3$ was ground in a corundum mill.
Briquettes were molded from these materials at 500 kg/cm^2, and fired at
$1750^{\circ}C$. Two types of initial dross were used: alkaline with pH = 10.5
and acid with pH = 1.5-1.7. The casting properties of alkaline and acid
dross were determined. L. G. Markaryan, V. I. Markaryan, L. M. Privina,

Card 1/2

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B105/B110

Peculiarities of the casting ...

and M. I. Minkina assisted with this study. Alkaline dross has poor
casting properties. When using acid dross, washing with HCl may improve
casting properties, increase the density of the blanks, and reduce
shrinkage during firing. A moisture of about 30% and pH = 1.5-2.0 were
found to be most suitable for the casting of dross from stabilized ZrO_2
washed with HCl, the density of the casting being 2.8 g/cm^3 and that of
the fired product 5.45 g/cm^3. 2-4 days' storage after washing increases
the density of the blanks by up to 0.2 g/cm^3. There are 5 figures,
4 tables, and 11 references: 7 Soviet and 4 non-Soviet. The four
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ASSOCIATION: Khimiko-tekhnologicheskiy institut im. Mendeleyeva (Institute
of Chemical Technology im. D. I. Mendeleyev)

Card 2/2

KOLBASOVA, V.K.; LYAMINA,V.P., starshiy nauchnyy sotrud.; MAKAROV,A.S.;
SHEPELEVA, N.A., starshiy nauchnyy sotrud.; SHPINDLER, M.A.,
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niya vnutrennikh del Kostromskogo oblispolkoma (for Makarov)
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KOL'BAYEV, Kh.

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v Praze (prednosta: prof. dr. M. Fucik) a Angiologicka laborator
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